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Nebraska Summary: S162 Ford 7740 12x12

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SUMMARY OF OECD TEST 1436—NEBRASKA SUMMARY 162

FORD NEW HOLLAND 7740 12x 12 DIESEL

12 SPEED

Location of Test: Silsoe Research Institute, Wrest Park, Silsoe Bedford, England MK45 4HS

Dates of Test: June to August, 1992

Manufacturer: FORD NEW HOLLAND LTD, Basildon, Essex, England

POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—985 rpm)					
86.2 (64.3)	2071	4.98 (18.87)	0.404 (0.246)	17.31 (3.41)	

VARYING POWER AND FUEL CONSUMPTION

86.2 (64.3)	2071	4.98 (18.87)	0.404 (0.246)	17.31 (3.41)	Air temperature
74.8 (55.8)	2113	4.56 (17.28)	0.426 (0.259)	16.40 (3.23)	73°F (23°C)
56.3 (42.0)	2131	3.75 (14.20)	0.465 (0.283)	15.02 (2.96)	Relative humidity
38.1 (28.4)	2149	3.02 (11.42)	0.552 (0.336)	12.66 (2.49)	62%
18.9 (14.1)	2155	2.19 (8.29)	0.810 (0.493)	8.63 (1.70)	Barometer
—	2198	1.46 (5.53)	—	—	29.9" Hg (101.2 kPa)

Maximum Torque 276.0 lb.-ft. (374.2 Nm) at 1260 rpm
Maximum Torque Rise 26.3%
Torque rise at 1600 engine rpm—13%

DRAWBAR PERFORMANCE (UNBALLASTED—FRONT DRIVE ENGAGED) FUEL CONSUMPTION CHARACTERISTICS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Temp.°F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
Maximum Power—8th (1H) Gear									
73.6 (54.9)	4585 (20.4)	6.02 (9.69)	2068	3.9	0.478 (0.291)	14.62 (2.88)	183 (84)	75 (24)	29.8 (101.0)
75% of Pull at Maximum Power—8th (1H) Gear									
57.0 (42.5)	3435 (15.3)	6.22 (10.01)	2117	3.0	0.519 (0.316)	13.46 (2.65)	180 (82)	79 (26)	29.8 (100.9)
50% of Pull at Maximum Power—8th (1H) Gear									
38.1 (28.4)	2260 (10.1)	6.32 (10.17)	2132	2.2	0.635 (0.386)	11.01 (2.17)	181 (83)	79 (26)	29.8 (100.9)
75% of Pull at Reduced Engine Speed—9th (4M) Gear									
56.9 (42.5)	3425 (15.2)	6.23 (10.03)	1537	3.0	0.441 (0.268)	15.87 (3.13)	181 (83)	81 (27)	29.8 (100.9)
50% of Pull at Reduced Engine Speed—9th (4M) Gear									
37.7 (28.1)	2240 (10.0)	6.31 (10.15)	1541	2.1	0.493 (0.300)	14.16 (2.79)	178 (81)	81 (27)	29.8 (100.9)

FUEL and OIL: Fuel No. 2 Diesel Cetane No. 54.5 **Specific gravity converted to 60°/60° F (15°/15°C)** 0.8400 **Fuel weight** 6.99 lbs/gal (0.838 kg/l) **Oil SAE 15W40 Oil consumption for 10 hours NA Transmission and hydraulic lubricant SAE 80W Front axle lubricant SAE 80W**

ENGINE: Make Ford New Holland Diesel **Type** four cylinder vertical with turbocharger **Serial No.** PA335116 **Crankshaft** lengthwise **Rated engine speed** 2100 **Bore and stroke** 4.4" × 5.0" (111.8 mm × 127.0 mm) **Compression ratio** 17.5 to 1 **Displacement** 304 cu in (4987 ml) **Starting system** 12 volt **Lubri-cation** pressure **Air cleaner** two paper elements and aspirator **Oil filter** one full flow cartridge **Fuel filter** two paper elements **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat and variable speed fan

CHASSIS: **Type** front wheel assist **Serial No.** BD 05915 **Tread width** rear 64.1" (1628 mm) to 79.8" (2028 mm) front 54.8" (1392 mm) to 84.3" (2142 mm) **Wheel base** 93.0" (2362 mm) **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Nominal travel speeds mph (km/h)** first 1.24 (2.00) second 1.81 (2.91) third 2.45 (3.95) fourth 2.81 (4.53) fifth 3.78 (6.09) sixth 4.10 (6.60) seventh 5.56 (8.95) eighth 6.20 (9.98) ninth 8.58 (13.80) tenth 9.03 (14.53) eleventh 12.26 (19.73) twelfth 18.89 (30.40) reverse 1.27 (2.05), 1.86 (2.99), 2.52 (4.05), 2.89 (4.65), 3.88 (6.25), 4.20 (6.76), 5.70 (9.18), 6.37 (10.25), 8.79 (14.15), 9.26 (14.91), 12.58 (20.24), 19.38 (31.19) **Clutch** single dry disc operated by foot pedal **Brakes** multiple wet disc hydraulically actuated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 1890 engine rpm and 1000 rpm at 2103 engine rpm (For US market—540 at 1890 rpm and 1000 at 2049 engine rpm) **Unladen tractor mass** 9675 lb (4388 kg)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet manufacturers claim of 17.4 gpm (69 l/min) hydraulic flow. The performance figures on this summary were taken from a test conducted under the OECD test Code II Restricted Standard Test Code procedure.

**DRAWBAR PERFORMANCE
(UNBALLASTED—FRONT DRIVE ENGAGED)
MAXIMUM POWER IN SELECTED GEARS**

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kWh)	Hp.hr/gal (kW.h/l)	Temp.°F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
4th (1M) Gear									
64.0 (47.7)	9665 (43.0)	2.48 (3.99)	2104	14.3	0.538 (0.327)	12.99 (2.56)	180 (82)	70 (21)	29.8 (101.0)
5th (4L) Gear									
73.0 (54.4)	7665 (34.1)	3.57 (5.74)	2073	6.8	0.483 (0.294)	14.47 (2.85)	183 (84)	77 (25)	29.8 (101.0)
6th (2M) Gear									
72.4 (54.0)	6915 (30.8)	3.93 (6.32)	2079	5.6	0.488 (0.297)	14.31 (2.82)	181 (83)	68 (20)	29.8 (101.0)
7th (3M) Gear									
72.4 (54.0)	5015 (22.3)	5.47 (8.70)	2073	3.9	0.493 (0.300)	14.21 (2.80)	180 (82)	66 (19)	29.8 (101.0)
8th (1H) Gear									
73.6 (54.9)	4585 (20.4)	6.02 (9.69)	2068	3.9	0.478 (0.291)	14.62 (2.88)	183 (84)	75 (24)	29.8 (101.0)
9th (4M) Gear									
71.6 (53.4)	3180 (14.2)	8.44 (13.58)	2077	2.7	0.493 (0.300)	14.18 (2.79)	181 (83)	75 (24)	29.8 (101.0)

TRACTOR SOUND LEVEL WITH CAB

dB(A)

Gear closest to 4.7 mph (7.5 km/h) 6th (2M) gear	77.0
Maximum sound level—6th (2M) gear	77.0
Transport speed—no load—12th (4H) gear	76.0
Bystander	—

TIRES, BALLAST AND WEIGHT

With Ballast

Without Ballast

Rear Tires	—No., size, ply & psi (kPa)	Two 18.4R38; **, 12 (83)	Two 18.4R38; **, 12 (83)
Ballast	—Liquid (total)	None	None
	—Cast Iron (total)	665 lb (302 kg)	None
Front Tires	—No., size, ply & psi (kPa)	Two 14.9R28; **, 12 (83)	Two 14.9R28; **, 12 (83)
Ballast	—Liquid (total)	None	None
	—Cast Iron (total)	710 lb (323 kg)	None
Height of Drawbar		17.3 in (440 mm)	18.5 in (470 mm)
Static Weight with Operator	—Rear	6345 lb (2879 kg)	5850 lb (2654 kg)
	—Front	4870 lb (2209 kg)	3990 lb (1809 kg)
	—Total	11215 lb (5088 kg)	9840 lb (4463 kg)

We, the undersigned, certify that this is a true summary of data from OECD Report No. **1436**, Nebraska Summary 162, October 3, 1994.

LOUIS I. LEVITICUS
Engineer-in-Charge

R.D. GRISSO
M.F. KOCHER
K. VON BARGEN
Board of Tractor Test Engineers

**DRAWBAR PERFORMANCE
(BALLASTED—FRONT DRIVE ENGAGED)
FUEL CONSUMPTION CHARACTERISTICS**

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption		Temp. °F (°C)		Barom. inch Hg (kPa)
					lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	cool- ing med	Air dry bulb	
Maximum Power—6th (2M) Gear									
74.2 (55.3)	7020 (31.2)	3.96 (6.38)	2080	4.6	0.478 (0.291)	14.62 (2.88)	183 (84)	61 (16)	30.1 (101.8)
75% of Pull at Maximum Power—6th (2M) Gear									
58.9 (43.9)	5305 (23.6)	4.16 (6.69)	2160	3.6	0.526 (0.320)	13.27 (2.61)	180 (82)	66 (19)	30.0 (101.7)
50% of Pull at Maximum Power—6th (2M) Gear									
40.0 (29.8)	3540 (15.8)	4.24 (6.82)	2177	2.6	0.620 (0.377)	11.27 (2.22)	180 (82)	66 (19)	30.0 (101.7)
75% of Pull at Reduced Engine Speed—7th (3M) Gear									
58.7 (43.8)	5295 (23.6)	4.16 (6.70)	1592	3.6	0.444 (0.270)	15.76 (3.11)	178 (81)	66 (19)	30.0 (101.7)
50% of Pull at Reduced Engine Speed—7th (3M) Gear									
39.7 (29.6)	3520 (15.7)	4.23 (6.80)	1600	2.6	0.487 (0.296)	14.37 (2.83)	176 (80)	66 (19)	30.0 (101.7)

MAXIMUM POWER IN SELECTED GEARS

3rd (3L) Gear									
65.8 (49.1)	11375 (50.6)	2.17 (3.49)	2137	15.1	0.546 (0.332)	12.79 (2.52)	187 (86)	64 (18)	30.0 (101.7)
4th (1M) Gear									
73.2 (54.6)	10510 (46.8)	2.61 (4.21)	2087	8.8	0.490 (0.298)	14.26 (2.81)	181 (83)	66 (19)	30.1 (101.8)
5th (4L) Gear									
74.6 (55.6)	7710 (34.3)	3.63 (5.84)	2072	5.1	0.477 (0.290)	14.67 (2.89)	181 (83)	66 (19)	30.0 (101.7)
6th (2M) Gear									
74.2 (55.3)	7020 (31.2)	3.96 (6.38)	2080	4.6	0.478 (0.291)	14.62 (2.88)	183 (84)	61 (16)	30.1 (101.8)
7th (3M) Gear									
73.4 (54.7)	5070 (22.5)	5.43 (8.73)	2074	3.5	0.483 (0.294)	14.47 (2.85)	183 (84)	66 (19)	30.1 (101.8)
8th (1H) Gear									
74.0 (55.2)	4575 (20.3)	6.07 (9.77)	2076	3.3	0.480 (0.292)	14.57 (2.87)	181 (83)	66 (19)	30.0 (101.7)
9th (4M) Gear									
71.1 (53.0)	3145 (14.0)	8.48 (13.64)	2081	2.6	0.501 (0.305)	13.96 (2.75)	180 (82)	66 (19)	30.0 (101.7)

SUPPLEMENTARY TESTS WITH 540 RPM PTO SHAFT POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Gal./hr (l/h)	lb./hp.hr (kg/kWh)	Hp.hr./gal (kW.h/l)	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed—(PTO speed—593 rpm)					
86.1 (64.2)	2075	4.97 (18.83)	0.404 (0.246)	17.31 (3.41)	
Standard Power Take-off speed (541 rpm)					
83.0 (61.9)	1894	4.55 (17.23)	0.383 (0.233)	18.25 (3.59)	
VARYING POWER AND FUEL CONSUMPTION					
86.1 (64.2)	2075	4.97 (18.83)	0.404 (0.246)	17.31 (3.41)	Air temperature
74.3 (55.4)	2107	4.54 (17.20)	0.427 (0.260)	16.37 (3.22)	73°F (23°C)
56.4 (42.1)	2135	3.74 (14.14)	0.464 (0.282)	15.08 (2.97)	Relative humidity
37.5 (28.0)	2144	3.00 (11.38)	0.559 (0.340)	12.51 (2.46)	54%
19.2 (14.3)	2172	2.19 (8.29)	0.799 (0.486)	8.73 (1.72)	Barometer
—	2198	1.45 (5.49)	—	—	29.9" Hg (101.3 kPa)

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II

Quick Attach: None

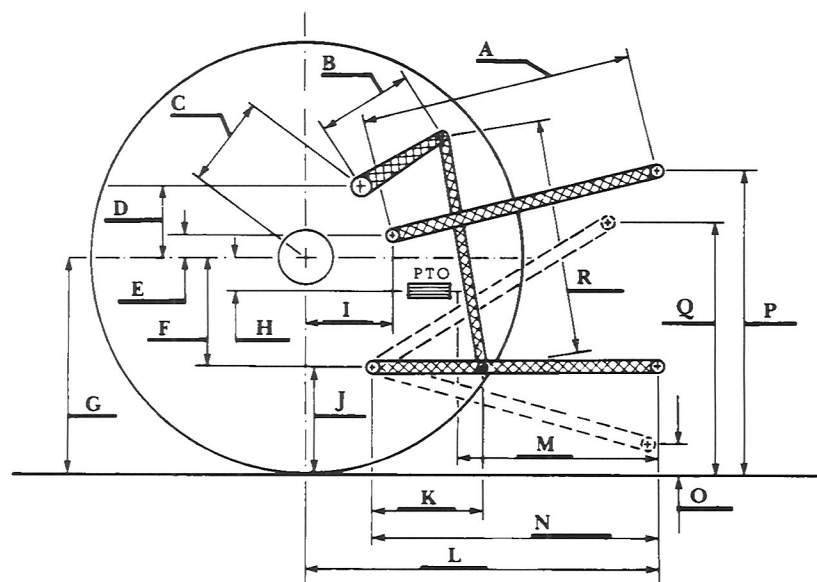
Maximum Force Exerted Through Whole Range: 6225 lbs (27.7 kN)

i) Opening pressure of relief valve: NA

Sustained pressure with relief valve open: 2640 psi (182 bar)

ii) Pump delivery rate at minimum pressure and rated engine speed: At auxiliary service connection 9.6 GPM (36.4 l/min) At remote hydraulic port connection 15.1 GPM (57.3 l/min)

iii) Pump delivery rate at maximum hydraulic power: 7.6 GPM (28.7 l/min) 12.5 GPM (47.5 l/min)
Delivery pressure: 2465 psi (170 bar) 2465 psi (170 bar)
Power: 10.9 HP (8.1 kW) 18.1 HP (13.5 kW)



HITCH DIMENSIONS AS TESTED—NO LOAD

	inch	mm
A	28.5	725
B	10.0	254
C	14.0	356
D	13.4	341
E	5.9	149
F	9.0	229
G	32.3	820
H	1.9	47
I	12.8	325
J	23.3	591
K	18.3	466
L	40.0	1017
M	22.0	560
N	36.0	915
O	7.9	200
P	47.3	1201
Q	33.9	860
R	32.5	825